PROCEEDINGS OF THE CLUB

Wednesday, March 25, 1903

The meeting was held at the New York Botanical Garden; Dr. MacDougal in the chair; thirteen persons present.

The first paper of the announced program was by Mr. Harper, who discussed "Some Pines of the southeastern United States." In July, 1902, Mr. Harper spent a day at Ocilla, Georgia, where Dr. C. H. Herty of the Bureau of Forestry is carrying on investigations relating to the turpentine industry. An effort to determine the several forms of turpentine pines recognized by those engaged in this work led Mr. Harper to attempt a somewhat critical study of the diagnostic characters and distribution of the southern pines.

The best known of the turpentine trees is the long-leaf pine, *Pinus palustris* Miller (*P. australis* Michx.). This ranges from Virginia to Florida and Texas. In Georgia it is found on nearly every square mile of the coastal plain and extends some distance into the metamorphic region. It occurs on dry sandy soil, never being found in swamps, in spite of its specific name. It is readily distinguished by its long leaves and large cones.

The slash pine, another species used by the turpentine workers, is certainly the *Pinus Elliotti* Engelm., but probably not *P. Cubensis* Griseb. or *P. heterophylla* (Ell.) Sudw., two older names which have been associated with it. The species ranges from South Carolina to Mississippi, mostly near the coast, but extending 125 miles inland in Georgia. In contrast with *Pinus palustris*, the typical form is always found in moist situations, commonly in swamps, with *Taxodium*. It has much the same habit as *P. palustris*, but is distinguished by its shorter leaves, smaller, unarmed cones, and especially by its bark. The bark is difficult to describe but is very characteristic and when once known affords the best means of distinguishing the tree at a glance, as may often be done from a car window.

The so-called old-field slash pine occurs as second growth on dry soils in the coastal plain. It has not the characteristic form

or bark of *Pinus Elliotti* but its leaves and cones have the same characters and it is probably the same species. Some authors state that *Pinus Elliotti* is replacing *P. palustris* wherever the latter is cut away, but this does not seem to be the case to any appreciable extent in Georgia, where *P. palustris* reproduces itself freely.

Pinus heterophylla was originally described very briefly by Elliott as *Pinus Taeda* var. *heterophylla*. It is improbable that Elliott would have considered the slash pine, had he really known it, as a variety of *Pinus Taeda*. There is, however, a pine growing along the coast of Georgia, in situations like that described by Elliott for his variety *heterophylla*, which has much the appearance of *Pinus Taeda*, though probably entitled to specific distinction.

A pine which is sometimes chipped for turpentine, but fails to yield any, is *Pinus serotina* Michx., a comparatively little-known species. This ranges from North Carolina to Florida, occurring in sandy swamps. In Georgia, it is widely but sparsely distributed over the coastal plain, extending inland to within a few miles of the fall-line. Its cones are quite characteristic and remain on the tree for years, whence its name. It can be distinguished at a glance by its habit of sending out short branches all along the trunk, probably from adventitious buds.

Mr. Harper's paper was illustrated by photographs and specimens.

The second paper was by Dr. W. A. Murrill and was entitled "Remarks on some Generic Types among the Polyporaceae." Dr. Murrill gave a *résumé* of the treatment of the genus *Polyporus* and the family Polyporaceae by Micheli, Dillenius, Linnaeus, Adanson, Haller, Scopoli, Paulet, Palisot de Beauvois, Pollini, Fries, Gillet, Karsten, and others, discussing the historical types of *Polyporus*, *Agaricus*, *Favolus*, *Hexagona*, *Cyclomyces*, *Leuzites*, *Gloeophyllum*, *Fomes*, *Ganoderma*, *Elfvingia*, *Cryptoporus*, and *Pyropolyporus*. Some of the more striking characters of the genera were illustrated in an artificial key. The results of Dr. Murrill's studies among the Polyporaceae have recently been or soon will be published in the *Bulletin* of the Torrey Botanical

Club. The paper was illustrated by numerous specimens, some of which were obtained by Dr. Murrill in Sweden on the collecting grounds of Professor Elias Fries.

Mr. Nash exhibited two living plants from the conservatories, one a *Rhododendron* of a peculiar type, from Japan, known as *Rhododendron lincarifolium*, the other an *Atamosco*, of an undetermined species, from the Bahamas.

Dr. MacDougal announced that the Desert Botanical Laboratory of the Carnegie Institution is to be located on a hill near Tucson, Arizona, at a point having an elevation of about 3,100 feet above the sea. Photographs of the locality were shown.

MARSHALL A. HOWE,
Secretary pro tem.

TUESDAY, APRIL 14, 1903

The meeting was held at the College of Pharmacy; Rev. J. Henry Watson in the chair; nine presons present.

The paper of the evening was presented by Rev. L. H. Lighthipe. It was entitled "The Flora of the Pine-Barrens of New Jersey," and was illustrated by a large number of specimens.

The subject was introduced by a sketch of the pine-barren region which extends along the Atlantic coast immediately behind the coastal zone and is limited at the northwest by the Triassic formation, thus covering the Cretaceous and later geological formations.

The plants most characteristic of the region of pine-barrens were enumerated with reference to their general as well as local distribution. The ferns most common are: *Pteridium aquilinum*, *Woodwardia Virginica*, *W. areolata* and *Onoclea sensibilis*. *Schizaea pusilla* has been found only in New Jersey, Nova Scotia and Newfoundland. *Lygodium palmatum* is found in New Jersey only in a few places. Lycopodiaceae and Equisetaceae are common members of the flora.

Pinus rigida and *Pinus Virginiana* are common, while *Pinus echinata* is less often met with. In the swamps the white cedar, *Chamaecyparis thyoides*, is characteristic.

Large numbers of grasses, many of them of much value in binding together the sand, abound. *Andropogon*, *Uniola*, *Triodia*, *Stipa*, *Aristida*, *Panicum*, *Panicularia* and *Cenchrus* are largely represented. *Abama*, *Xerophyllum*, *Chamaelirium* and *Chrosperma* represent the Melanthaceae. *Lilium superbum*, *Alętris farinosa* and *A. aurea* are common Liliaceae.

Of the orchids, *Cypripedium acaule*, *Blephariglottis cristata*, *B. ciliaris*, *B. blephariglottis*, *Gymnadeniopsis clavellata*, *Pogonia ophioglossoides*, *P. divaricata*, *Arethusa bulbosa* and *Limodorum tuberosum* are usual.

The principal oak trees are *Quercus nigra*, *Q. coccinea*, *Q. Phellos*, *Q. minor*, *Q. prinoides*, *Q. nana* and *Q. digitata*. The "chinquapin," *Castanea pumila*, also occurs. The sweet-gum, *Liquidambar*, is a common tree; in the swamps *Magnolia glauca* is frequent.

Of the pink family, *Arenaria Caroliniana* is very abundant.

In ponds is found the water lily, *Castalia odorata*, associated with *Brasenia peltata;* also the yellow lotus, *Nelumbo lutea*, probably introduced from the west by the aborigines. In the marshes occur *Sarracenia purpurea*, *Drosera rotundifolia* and *D. intermedia*. *Drosera filiformis* is a true pine-barren plant.

The saxifrages show no peculiar plants, except *Itea Virginica*, which is also a pine-barren plant. The rose family here includes two common blackberries, *Rubus cuneifolius* and *R. hispidus*, and many wild roses.

The Papilionaceae are largely represented; among them, *Lupinus perennis*, *Trifolium arvense*, *T. agrarium*, *T. procumbens*, *Cracca Virginiana*, *Meibomia Marylandica*, *Lespedeza hirta*, *L. repens*, *L. angustifolia*, *Galactia regularis*, and species of *Phaseolus*, *Strophostyles*, *Apios* and other genera.

The milkwort species are *Polygala lutea*, *P. cruciata*, *P. brevifolia*, *P. incarnata*, *P. Mariana*, *P. Nuttallii* and *P. polygama*. *Corema Conradii* is found in the central part of the region and this is probably its southernmost abiding place.

Ilex glabra is the most usual holly tree. *Ascyrum stans* is a pine-barren St. John's-wort, but several other species are found. *Helianthemum Canadense* and about five species of *Lechea* com-

prise the ordinary plants of the family Cistaceae. *Viola pedata*, *V. Atlantica*, *Rhexia Mariana*, *R. Virginica* and *R. aristosa* are found. *Chamaenerion angustifolium* covers large spaces, also *Oenothera laciniata.*

The Ericaceae have such members as *Clethra alnifolia*, *Azalea nudiflora*, *A. viscosa*, *A. glauca*, *Kalmia angustifolia*, *Leucothoë*, *Pieris*, *Chamaedaphne*, *Xolisma ligustrina*, *Epigaea repens*, *Dendrium buxifolium* and *Gaultheria procumbens.*

The cranberries and the pyxie moss, *Pyxidanthera barbulata*, are found in suitable places. The gentians to be noted are *Bartonia Virginica* and *Gentiana Porphyrio*, as well as *Sabbatia* species. In the ponds with other water plants is found *Limnanthemum lacunosum.* *Asclepias* species abound. The Labiatae have such distinctive species as *Monarda punctata*, *Salvia lyrata* and *Scutellaria integrifolia.*

Lentibulariaceae are represented by *Utricularia cornuta*, *U. inflata*, *U. purpurea*, *U. subulata*, *U. intermedia* and *U. gibba.*

The Compositae are represented by about eight species of *Eupatorium*, two species of *Chrysopsis*, *Lacinaria graminifolia*, *Chondrophora*, *Sclerolepis uniflora*, *Solidago* and *Aster*, with a half dozen or more species each, and many others.

EUGENE SMITH,
Secretary pro tem.

NEWS ITEMS

Professor L. H. Bailey has been appointed director of the College of Agriculture of Cornell University.

Dr. Theodor Holm, of Washington, D. C., is spending a few weeks at the New York Botanical Garden, engaged in systematic studies on the Ranunculaceae.

Miss Anna Murray Vail, the librarian of the New York Botanical Garden, sailed for Europe on April 22, for the purpose of securing certain valuable books for the Garden library.

Mr. O. F. Cook, of the Bureau of Plant Industry, U. S. Department of Agriculture, has gone to Costa Rica with the intent of collecting data relative to the culture of bananas, coffee, and other tropical plants of economic importance.